

Abstract Submitted
for the PSF09 Meeting of
The American Physical Society

**A Map Between $d = 3$ and $d = 4$ Spacetime Dimensional k-strings
Using Holography** XIAOLONG LIU, KORY STIFFLER, University of Iowa, UNIVERSITY OF IOWA TEAM — We investigate k-string in $d=3$ and $d=4$ spacetime dimensions using holography. Exploiting the similarities between two supergravity backgrounds, Maldacena-Nunez background and Maldacena-Nastase background, we map calculations for k-strings between $d = 3$ and $d = 4$ spacetime dimensions. The specific calculations investigated are the usual lowest order tension term for the energy of k-strings and the first order, one loop corrections, the Luscher term. The tension term is proportional to L , the length between quark antiquark pairs and the Luscher term is the typical $1/L$ Coulombic correction.

Xiaolong Liu
University of Iowa

Date submitted: 19 Oct 2009

Electronic form version 1.4